



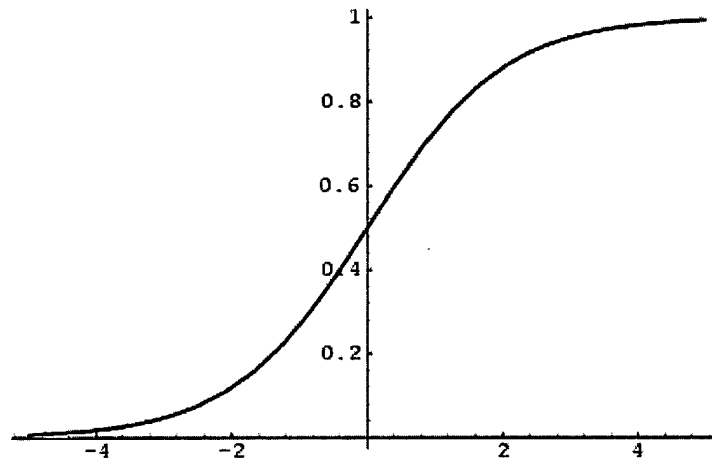
Sigmoid Curve

See [Sigmoid Function](#)

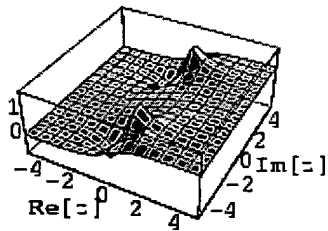
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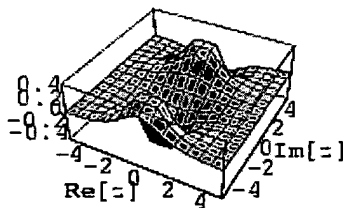
Sigmoid Function



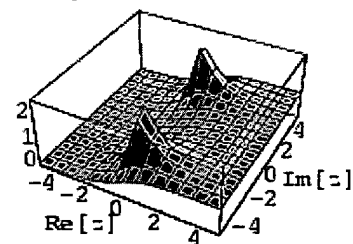
`Re[SigmoidFunction z]`



`Im[SigmoidFunction z]`



`|SigmoidFunction z|`



The function

$$y = \frac{1}{1 + e^{-x}}$$

which is the solution to the Ordinary Differential Equation

$$\frac{dy}{dx} = y(1 - y).$$

It has an inflection point at $x = 0$, where

$$y''(x) = -\frac{e^x(e^x - 1)}{(e^x + 1)^3} = 0.$$

See also Exponential Function, Exponential Ramp

References

von Seggern, D. CRC Standard Curves and Surfaces. Boca Raton, FL: CRC Press, p. 124, 1993.

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Posterior probability

In [Bayesian probability](#) theory, the **posterior probability** is the probability of some event occurring after empirical data has been considered. It can be calculated by [Bayes' theorem](#). Compare with prior probability, which is subjectively judged in the absence of empirical data.

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